CPU, NPX AND TIMING (2)

/ARDY — /ARDY CLK8M — CLK8M
/RESCPU — /RESCPU CTRL[1..10] — CTRL[1..10]
A[0..23] — A[0..23]
CMDLY — CMDLY D[0..15] — D[0..15]
/SRDY — /SRDY CLKDLY — CLKDLY
CLK80 — CLK80
SYSRES — SYSRES
REFREQ — REFREQ
INTR — INTR S[0..1]
/NPXSEL — /NPXSEL
/DMAREQ — /DMAREQ
A[0..15] — A[0..15] INTDMA — INTDMA
DREQ[0..3] — DREQ[0..3] /IOSL — /IOSL
/IOSB — /IOSB

EPROM MEMORY (6)

CTRL[1..10]
A[0..15] — A[0..15]
D[0..15] — D[0..15]
SEL[0..9] — SEL[0..9]
S[0..1]

SEL5 /NPXSEL

80-BUS INTERFACE (4)

/BUSRQ80 — /BUSRQ80 /RESCPU — /RESCPU
CLK8M — CLK8M RES80BUS
M/IO — M/IO EXTRESEN
A[0..15] — A[0..15] /PWRF
/BA080 — /BA080 AUXPWR
IOD[0..7]
/BYTE — /BYTE
/B80EN — /B80EN
SEL[0..9] /DONE80 — /DONE80
SYSRES — SYSRES /B80LOCK — /B80LOCK
CTRL[1..10] B80AOC — B80AOC
CLK80 — CLK80 /BAI80 — /BAI80
INT80B[0..4]

INT80B[0..4]
DREQ0 IR0 INT80B0 IR0
DREQ1 IR1 INT80B1 IR1
DREQ4 IR2 INT80B2 IR2
DREQ4 IR4 INT80B3 IR3
DREQ3 IR3 INT80B4 IR4

IR0 IR02
IR1 IR03
IR2 IR05
IR3 IR06
IR4 IRQ1

BUS CONTROL (3)

CTRL[1..10] /ARDY — /ARDY
A[0..23] IOD[0..7]
D[0..15] A[0..15]
/B80LOCK — /B80LOCK
CLKDLY — CLKDLY
SYSRES — SYSRES /BYTE — /BYTE
MM0 — MM0 SEL[0..9]
MM1 — MM1 /B80EN — /B80EN
/IOSL — /IOSL M/IO — M/IO
/IOSB — /IOSB CMDLY — CMDLY
B80AOC — B80AOC
/BAI80 — /BAI80 /BA080 — /BA080
/DONE80 — /DONE80 /BUSRQ80 — /BUSRQ80

DYNAMIC RAM MEMORY (5)

S[0..1]
CLKDLY — CLKDLY D[0..15]
A[0..15]
/DMAREQ — /DMAREQ
REFREQ — REFREQ /SRDY — /SRDY
CTRL[1..10]
SEL[0..9]
A[0..23]
SYSRES — SYSRES

IOD[0..7]
DREQ[0..3]

PERIPHERAL I/O (7)

IOD[0..7] IRQ[0..7] — IRQ[0..7]
A[0..15]
SEL[0..9] AUXPWR
CTRL[1..10] /PWRF
INTDMA — INTDMA EXTRESEN
RES80BUS
SYSRES — SYSRES MM0 — MM0
MM1 — MM1
CLKDLY — CLKDLY INTR — INTR

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GM886 - 286 PROCESSOR CARD			
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Title
GM886 — CPU, NPX AND TIMING

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* DB HI BUFF *

IC3
74HCT245

A1 B1 IOD0
A2 B2
A3 B3
A4 B4
A5 B5
A6 B6
A7 B7
A8 B8
G
DIR

D8 D9 D10 D11 D12 D13 D14 D15

* DB LO BUFF *

IC10
74HCT646

A1 B1 IOD7
A2 B2
A3 B3
A4 B4
A5 B5
A6 B6
A7 B7
A8 B8
G
DIR
CAB
SAB
CBA
SBA

D7 D6 D5 D4 D3 D2 D1 D0

IC2
16L8

/B80SEL
B80ADC
M/IO
AL0
/BHE
DEN
DT/R
/INTA
/IOSLL

/BYTE

/IOSB
/IOSL

D[0..15]

/B80ADC

CTRL[1..10]
CTRL[1..10]

CTRL1 DEN
CTRL2 DT/R
CTRL3 ALE
CTRL4 /BHEU
CTRL5 /INTA
CTRL6 /MRDC
CTRL10 M/IOU

/CS8250 SEL0
/CS8255 SEL1
/CSRTC SEL2
/CS8259 SEL3
/LATHI80 SEL4
/NPXSEL SEL5
/B80SEL SEL6
/B80TLAT SEL7
/RAMSEL SEL8
/ROMSEL SEL9

SEL[0..9] SEL[0..9]

IOD[0..7] IOD[0..7]

AC[0..23] AC[0..23]

ALE

IC27
16V8

I0 F0 AL7
I1 F1 AL6
I2 F2 AL5
I3 F3 AL4
I4 F4 AL3
I5 F5 AL2
I6 F6 AL1
I7 F7 AL0
I8
I9

A0 A1 A2 A3 A4 A5 A6 A7

IC16
16V8

I0 F0 AL8
I1 F1 AL9
I2 F2 AL10
I3 F3 AL11
I4 F4 AL12
I5 F5 AL13
I6 F6 AL14
I7 F7 AL15
I8
I9

A15 A14 A13 A12 A11 A10 A9 A8

IC46
16L8

/ROMSELU
/BHEU
M/IOU
/B80AX
/PAI80
/B80LOCK

I1 O1 /B80EN /B80EN
I2 O2 M/IO   M/IO
I3 O3
I4 O4 /BHE
I5 O5
I6 O6 /ROMSEL
I7 O7 /B80
I8 O8 /BUSRQ80 /BUSRQ80
I9
I10

AL[0..15]

ALE[0..15]

IC41
20L8

AL3 I1 O1 /CS8250
AL4 I2 O2 /CS8255
AL5 I3 O3 /CSRTC
AL6 I4 O4 /CS8259
AL7 I5 O5 /LATHI80
AL8 I6 O6 /NPXSEL
AL9 I7 O7
AL10 I8 O8 /B80TLAT
AL11 I9
AL12 I10
AL13 I11
AL14 I12
AL15 I13
M/IO I14

IOSL

R10 4k7   R11 4k7

MM0
MM1

IC23
16L8

A16 I1 O1 /RAMSEL
A17 I2 O2 /ROMSELU
A18 I3 O3 /B80MEM
A19 I4 O4 ALE
A20 I5 O5
A21 I6 O6
A22 I7 O7
A23 I8 O8 M/IOU
I9
I10

MEMS

VCC

C52 100n C53 100n C57 100n C58 100n C59 100n C60 100n C61 100n

VSS

IC38
20R6

/ROMSELU I1 O1 /B80AX
/CS8250 I2 O2   /ARDY
M/IO I3 O3
/IOSL I4 O4
/IOSB I5 O5
I6 O6
SYSRES I7 O7 /IOSLL
ALE I8 O8 /CMDLY
/B80MEM I9
/INTA I10
I11
/DONE80 I12

CLKDLY CLK
OE

IOSM

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GM886 - BUS CONTROL LOGIC

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AL[0..15]

AL[0..15]

IC42
AL1	10	A0	00	11	D0
AL2	9	A1	01	12	D1
AL3	8	A2	02	13	D2
AL4	7	A3	03	15	D3
AL5	6	A4	04	16	D4
AL6	5	A5	05	17	D5
AL7	4	A6	06	18	D6
AL8	3	A7	07	19	D7
AL9	25	A8			
AL10	24	A9			
AL11	21	A10			
AL12	23	A11			
AL13	2	A12			
AL14	26	A13			
	27	A14			

/ROMSEL 20 CE
/MRDC 22 OE
VCC ← 1 VPP
27256

IC43
AL1	10	A0	00	11	D8
AL2	9	A1	01	12	D9
AL3	8	A2	02	13	D10
AL4	7	A3	03	15	D11
AL5	6	A4	04	16	D12
AL6	5	A5	05	17	D13
AL7	4	A6	06	18	D14
AL8	3	A7	07	19	D15
AL9	25	A8			
AL10	24	A9			
AL11	21	A10			
AL12	23	A11			
AL13	2	A12			
AL14	26	A13			
	27	A14			

/ROMSEL 20 CE
/MRDC 22 OE
VCC ← 1 VPP
27256

D[0..15]

AL15

JP11
JUMPER 3W
■ 256k ■   o o o → VCC
■ 128/64 ■

CTRL[1..10]

CTRL[1..10]

CTRL6   /MRDC

SEL[0..9]

SEL[0..9]

SEL9   /ROMSEL

VCC

C27   C28
100n   100n

GND

Title
GM886 - EPROM MEMORY

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PERIPHERAL I/O

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RTCPWR

VCC   VDD

C56
47/6V3T

C55
100n

GND   VSS

C50
22p

R13
150k

X2
4.194304M

VC1
10-22p

IC53

IODO
IOD1
IOD2
IOD3
IOD4
IOD5
IOD6
IOD7

4 AD0   OSC1 2
5 AD1   OSC2 3
6 AD2
7 AD3   IRQ   19
8 AD4   CKFS 20
9 AD5   SQW   23
10 AD6   CKOUT 21
11 AD7

GND

IRQRTC

RTCCTL0
RTCCTL1
RTCCTL2
RTCCTL3

13 CE   PS   22
14 AS
15 R/W
17 DS
18 RES

HD146818

VCC

R19
1M2

IOD[0..7]

RTCCTL[0..3]

VCC

R17
47k

RTCCTL0

/SYSRES

/P7673

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